

POLICY FORUM

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ARE THE KIDS GETTING A JUMP ON THE GROWN-UPS?

"At computer camps, young minds are limbering up for the future"

This summer, at computer camps, hundreds of children performed feats of mental gymnastics that would boggle most adult minds. From San Diego to the Poconos, boys and girls at Atari summer camps created their own computer programs, designing sophisticated animation and probing the powerful ideas of computational geometry.

While half the camp population was riveted to personal computers, the other half was jackknifing into the pond or tearing around the baseball diamond in grass-green Atari Camp T-shirts. But when they came streaming back, these youngsters would jockey amiably for position outside the computer labs, itching to get back to work.

The classroom atmosphere is relaxed and unthreatening. The instructors, led by experienced educators, always stress the campers' personal interests. The programs are as varied as the children who create them: an analysis of animal environments, a system for averaging football scores, a moving maze game that jokes with the player, using a simulated human voice. Under the bloop-bleep-bop-bloop of the computers, the excitement is palpable.

Atari stimulates the campers from the first day by giving them tough problems they can solve. Having tasted success, beginners eagerly buckle down to learning their computer ABCs. Working alone and in teams, the children average 16½ hours a week in class.

"Hey, it worked!" may be the most thrilling words a child can speak. Over the four week camp period, the children begin to see themselves as problem-solvers. "They learn

how to be learners," says Curriculum Director Robert Kahn, adding, "There can't be a higher goal in education."

Guest speakers like computer graphics experts who helped develop "TRON," the state-of-the-art fantasy film, and Atari's own Dr. Alan Kay, who offers insights into Artificial Intelligence, give the children a broad sense of the technology's possibilities.

What about Frisbee, music, checkers, campfires? They're all part of Atari Computer Camps. But the children spend much of their free time in the labs. Although electronic games are popular, many kids go on to invent their own electronic entertainment, designing animated figures, from space ships to circus acts, and setting up complex games. Others create word puzzles or sound and light shows with advanced graphic designs.

Setting up a day camp with a similar mini-research lab for underprivileged children at the Capital Children's Museum in Washington, D.C., Atari found that the phenomenon cuts through not only race and sex but socio-economic level. With no previous experience, these children, mostly black, developed computer skills with the same fervor as the overnight campers.

The camps have been a knockout success, and more will be added next summer. In today's fast-moving and highly competitive world, parents want their children to achieve computer literacy. But what about the grown-ups? The average adult, not surprisingly, is hesitant about his own participation in the computer world. The future is hurtling toward him, sometimes with terrifying speed. Even the most positive aspects of the future are often

puzzling and intimidating. But unless the electronics companies learn how to reach him, we may in a few years see computer illiteracy on a grand scale, a generation of men and women shut off from a fundamental part of their children's lives.

Atari is working to demystify the personal computer for the average adult. Hardware is being made more inviting, affordable and easy to use, and Atari has hired some of the finest computer minds in the country to invent software as compelling as the company's electronic games. (Already, Atari computers can help you budget, learn to type, analyze your earnings, write music and even make decisions.) If Atari's ambitious program works, the adults may yet catch up to the kids.

What happens when the campers go home? Is the love of computers just a summer romance? Professor Seymour Papert of MIT believes that an involving encounter with this new technology can have a profound effect on children's lives. Drawing on the theories of the noted French psychologist Piaget, he has demonstrated that mastery of the computer develops a child's cognitive thinking.

A mind deeply involved in solving problems or creating new problems to solve is a mind limbering up for the future. Who knows what such bending and stretching might ultimately produce, a symphony based on a new tonal system, the unlocking of the mysteries of another planet, a key link in the discovery of the nature of living matter? Surely we can look forward to a generation more comfortable with its brains and with its ability to use them.



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